UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/613,932	07/01/2003	Takahiko Tanahashi	Y-218	4638

802   7590   10/18/2004

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EXAMINER
DESTA, ELIAS

ART UNIT	PAPER NUMBER
2857	

DATE MAILED: 10/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _29 January 2004_.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-5_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-5_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on _29 January 2004_ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☒ All   b) ☐ Some * c) ☐ None of:

      1. ☒ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

Detailed Action

Drawing Objection

1.   The drawing is objected to because the following minor informalities:

> Fig. 16 should have subsection, such as "a" and "b" or the second

embodiment (the graph shown) should be labeled as Fig. 17.

Claim rejection – 35 U.S.C. 101

2.   35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or
composition of matter, or any new and useful improvement thereof, may obtain a patent
therefor, subject to the conditions and requirements of this title.

3.   *Claims 1-5* are directed to non-statutory subject matter, because the

claims do not recite any form of technology.

The claims are directed to an abstract idea without practical application,

and thus the invention does not fall within the definition of technological arts.

The abstract idea expressed in the claims does not become a technological art

merely by recitation in the claim of "performing", "dividing", and/or

"recovering".

The Examiner observes that neither the specification nor the claims

discuss the use of any technology with respect to the claimed invention.

See *Diamond v. Diehr,* 450 U.S. 175, 185, 209 USPQ 1, 7(1981); *In re*

Warmerdam, 33 F.3d 1354, 1357, 31 USPQ2d 1754, 1756(Fed. Cir. 1994);

AT & T Corp. v. Excel Communications Inc., 172 F.3d 1352, 1355, 50 USPQ2d

1447, 1449-50(Fed. Cir. 1999); and *State Street Bank & Trust Co. v. Signature*

Fin. Group, Inc., 149 F.3d 1368, 1374-75, 47 USPQ2d 1596, 1602(Fed. Cir.

1998)

Conclusion

4.   *Citation of pertinent prior art*:

a.   *Dimas et al.* (U.S. Patent 6,512,999) teaches an apparatus and

method for simulating turbulence.

b.   *Weiler et al.* (IEEE Article, 'Hardware-Software-Balance Re-

sampling for the Interactive Visualization of Unstructured Grids')

teaches a method of re-sampling unstructured volume data on Cartesian

grids for achieving interactive visualization.

c.   *Kaup* (IEEE Article, 'Object-Based Texture Coding of Moving

Video in MPEG-4') teaches segment-based coding for MPEG-4

standardization.

d.   *Clark et al.* (IEEE Article, 'Stationary, Non Stationary, and

Hybrid Interactive Method of Moments Solution Scheme') teaches

sparse iterative method (SIM) in order to alleviate the problem

associated with segment renumbering.

e.   *Minyard et al.* (IEEE Article, 'Partitioning and Dynamic Load

Balancing of Adaptive Hybrid Grids for Large-Scale Turbulent Flow

Simulations') teaches three-dimensional prismatic/tetrahedral meshes.

f.   *Yee et al.* (IEEE Article, 'Conformal Hybrid Finite Difference Time

Domain and Finite Volume') teaches a hybrid method that combines

finite difference time domain and finite volume time domain.

g.   *Wang et al.* (AIAA Article, 'A 2^N Tree Based Automated Viscous

Cartesian Grid Methodology for Feature Capturing') teaches

unstructured grid-based CFD algorithm for automating fluid flow

simulation.

h.   *Ham et al.* (JOCP Article, 'A Cartesian Grid Method with

Transient Anisotropic Adaptation') teaches grid generation process and

the ease with which local refinement of the grid with recursive cell-

splitting operations.

2.   Any inquiry concerning this communication or earlier communications

from the examiner should be directed to Elias Desta whose telephone number

is (571)-272-2214. The examiner can normally be reached on M-Thu (8:30-

7:00).

If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, Marc S. Hoff can be reached on (571)-272-2216. The

fax phone numbers for the organization where this application or proceeding is

assigned are (703)-872-9306 for regular communications and After Final

communications.

Any inquiry of a general nature or relating to the status of this

application or proceeding should be directed to the receptionist whose

telephone number is (571)-272-1750

Elias Desta
Examiner
Art Unit 2857

-ed

October 6, 2004

HAL WACHSMAN
PRIMARY EXAMINER